

1 ATGGCCCCGC AGCAAGCCG GCCGGCCG CCCGGCCGT GCGAGCCCG 2 CGGGTACCGC CTCGCCGAGA GCGGGGGG CGCGGGGGC
TACCGGGGGC TCGTTCCGGC CGGGCGGAC GGGCGGGCA CGCTGGGG CGGGCGGCC CGGGCATGGG GAGGGGCTC CGGGCCCCCG
1 M A P Q Q G R P A L P A R C E P P A A P P V P R R E R G G R G A R

101 CGGGCCCCGG GGTGTCGGG CGGGGGGGC CGGGGGGGG CGGGGGGGG CGGGGGGGG CGGGGGGGG CGGGGGGGG CGGGGGGGG
CGGGGGGGG CGGGGGGG CGGGGGGG CGGGGGGG CGGGGGGG CGGGGGGG CGGGGGGG CGGGGGGG CGGGGGGG CGGGGGGG
35 G P G V S G G R G R A G G A E G R G V K C V L V G D G A V G K T S

201 CCTGCTGGTC AGCTACACCA CTAACGGCTA CCCAACCGAG TACATCCCTA CGGCCCTCGA CAACTCTCG GCCCTGGGTG CTGAGATGG GCGGCTGTG
GGACCAACAG TCGATGTGGT GATTGCCGAT GGGGTGGCT ATGTAGGGAT GCGGGAAAGCT GTGAAAGAGC CGGCACACCA GACATCTACC CGGGGGACAC
68 L V V S Y T T N G Y P T E Y I P T A F D N F S A V V S V D G R P V

301 AGACTCCAGC TCTGTGACAC TGCAGGACAG GATGAGTTG ACAAGCTGAG GCCCCCTCTGC TACACCAACA CAGACATCTT CCTGCTGTGC TTCAGGCTGG
TCTGAGGTG AGACACTGTG ACGTCCGTG CTACTAAC TGTGAGCTC CGGGGAGACG ATGGTGGTGT GTCTGTGAA GGACGACACG AAGTCGGACCC
101 R L Q L C D T A G Q D E F D K L R P L C Y T N T D I F L L C F S V V

401 TGAGCCCCAC ATCCTTCCAG AACGTGGCG AGAAGTGGT TCCAGAGATT CGACGTCACT GCCCAAAGGC CCCCACATCATC CTGGCTGGGA CACAGCTGGGA
ACTCGGGGTG TAGGAAGGTG TTGACCCGC TCTTCACCA AGGTCTCAA GTCAGTGA CGGTTCGGC GGGGTAGTAG GACCAAGCCT GTGTCAGCCT
135 S P T S F Q N V G E K W V P E I R H C P K A P I I L V G T Q S D

501 CCTCAGGGAG GACGTCAAAG TGCTCATAGA ACTGGACAAG TGCAAAAGGA AGCCGGTGGC TGAGAGGGG GCGAGGGTGT GCGGGAGGA AGTCAAAGCT
GGAGTCCCTC CTGCAAGTTACAGGATCT TGACCTGTTACGTTTCTCT ACGTTTCTCT ACGTTTCTCT ACGTTTCTCT ACGTTTCTCT ACGTTTCTCT
168 L R E D V K V L I E L D K C K E K P V P E E A A K L C A E E V K A

601 GTCTCTACA TCGAGTGTCTC AGCGTTGACT CAGAAAAACC TCAAAAGGGT TTTCGACGCC GCACTCATCCA GCACTCATGCC TCCCAAGCTAC
CAGAGGATGT AGCTCACGAG TCGCAACTGA GTCTTTTCTCA AAAGCTGCC CGGTAAACAC GACCATAGGT CGTGTAGTCTG AGGGTGTG
201 V S Y I E C S A L T Q K N L K E V F D A A I V A G I Q H S D S Q L Q

701 AGCCAAAGAA GTCTAAAGC AGGACCCGG ATAAGGTGGG GGACCTGTCC AAGTCTGGT GGAGGAAGTA TTGCTGCCCTG GCCTGACTCT CGCAAATAGC
TCGGTTCTCTT CAGATTTCTCG TCCCTGGGCC TATTCCACGC CCTGGACAGG TTCAAGACCA CCTCCCTCAT AACGACGGAC CGGACTGAGA GCGTTTATCG
235 P K K S K S R T P D K V R D L S K S W W R K Y C C L A O

801 AGGTGTAAAG GCTGCAACAG CTCTTTATGG ACCAGGGCTGT CATAGGATGA GCCCCAAAGC ACCCTCTCTC GCCCTTAACT TCCGTGTGC GGGAGCTTAG
TCCACAAATT CGACGTGTGAC GAGAAATACC TGCTCCGACA GTATCCCTACT CGGGTTTCG TGGAGAAGA CGGGAAATGAGA AGGACACAGC CCCTCGAAATC

901 GGCTGAGATT CATATGCAAAT ATACGTTTTT TAAAGTTACAT TTTTTTCTG TTAGTGTG AAGCTTGTG CTGAGACCT CGGGATTAAAT
CCGACTCTAA GTATACTGTTT TATGCAAAATTTAAC TTTCAATGTA AAAAAGAC AATTCAAGACC TTGCAAACTC GACATCTGGA GGCTAAATT

FIG.- 1A

1001 TTATATCCA TATGAAAAG GCTCTTCAAA GCGGGGTGTC AGCATGAAGT TCTGCTGTGT TGACAGGAC AAAGGAAAT GAATGGGACC TTCTCCTGAT
AATAATAAGGT ATATCTTTCC CGAGAAAGTTT CGCCCCACAG TCGTACTTCA AGACGACACA ACATGCTCTG TTACCCCTTAA GAGAGGACTA

1101 TAAGGGCTAC TGAGGGCTCA GTGCAGGCC CGTGTGCACC AGGGCTGGGT AGAGTGAGCA AGCGTGAGCT TTGAAACAC ACCAGCCACC CCCGGTTTTG
ATTCGGTTT CTAGACTTTG GCACACCTGG TCCGAACCA TCTCACTCGT TCGCACTCGA AACTTTGGT TGCTCGGTGG GGGCCAAAC

1301 AACATCCAC AGCCTACTGG CATACTGTG GCGAACAGTG CACTTGCTTG TTACGGTTT GTTTGTGTT TTAATCAC GTGACCAAGT ATATGGCTAT
TTGTAGGGTG TCGATGACC GTATCACAA CGCTTGTAC GTGAACGAAC AATGCCAAA CAAACAAAA AAATTAGTG CACTGGTCAA TATAACGATA

1401 GAAAATGGTG GAGATGCCTC GTAGAAGGCC AGTGGTGGGT GCACATGTGA CATTTCCTTC AGGGAGGCAC TCATGGTGA ACCAGAGGAGG GCTCTTAGCT
CTTTTACAC CTCTACGGAG CATCTTCCGC TCACGACCCA CGTGTACACT GTAAAAAGAAG TCCCTCGCTG AGTACCACTC TGGCTCTCTCC CGAGAATCGA

1501 TGCAGGACTG GCTTCTGCAG GGCACTCTGTG TCCCTGCTGTT AAAAGCAGGA GGAGGTGCTT GTCTGGGAGC TTTAAGTGTG CTGGGCTCAT ATGCTCCCGT
ACGTCCTGAC CGAAGACGT CGTAGACAC AGGACGACAA TTTTGTCTCT CCTCCACGAA CAGACCCCTG AAATTACAC GACCCGAGTA TAGCAGGGCA

1601 TTGCAAGGAA TTGGGCCACC TTGAGAGGCC ATAGTGTATG CCTATGGAC ACACACACAC TTTTCCTTA AGTCACCAA AATGCCCTGCC TGTACACACA
AACGTTCTT AACCCGGTGG AACTCTCCG TATCACTAC CGATAACCTTG TGTGTGTG AAAAGGAAT TCAGGGTTT TTACGGACGG ACATGTGTGT

1701 CACACACACA CACACACACA CACACTGGCT GGTGGTGTGA TGGAACCCCT AGACCCACCT CCCACCCCA CCCCTCCCCA AGCATGGCTG
GTGTGTGTGT GTGTGTGT GTGTGACTGT GTGTGTGTGT GTGTGACTGT ACCTGGAA TCTGGGGAA TCTGGGGAA GGGGGGGGT TCGTACCGAC

1801 CAAGTGTAG GGCAACACAC CTTGACATTTC TTGACACTTC TTGAAACAGA CATCATTTG TAGATCTTA ATTATACAT TTGTTTCAGG TCATAAATAG
GTTCACAGTC CGGGGTGTG GAAGGAGAG AACGTAAAG AAACTTGTCT GTAGTAAAC ATCTAGAAAT TAATATGTA AAAAAGTCC AGTATTTAC

1901 TGGGATGAAAC ATACTTGAA CCCCAGTGTCC TTCAAGGGTCC ATTGACTAGG GAGGCACGTGT CTTAGGGAC AGGTATGTGC AAGGCCCTTAC CCACCAAGTGG
ACCCCTACTTG TATGAAACTT GGGGTCACTGG AAGTCCCAAGG TAACTGTAC CTCCTGACAA GAATCCCTG TCCATACAG TTTCCGGAATG GTGGTCAAC

2001 CTTCTGCTG CAGTCATGT TTGTTGCACT TGTCTTAA GTGTGGGGT TTATGACCGA CTGTTCTGAG ACAGCCCTGT GTCAAGGCAAG CTCTTTCACA
GAAGAGGCC GTCAGTACA AACACCGTGA ACAAGAAATT CCACTCCAG AATACTGGCT GACAAGACTC TGTGGGACCA CAGTCGGTTC GAGAAAGTGT

2101 GGGTTGAGG TATTTCCAAG AGCCCATAGG AACCAAGACAG TGAATCATAG CTATCAGTT GCTGTGGCA AGGAACCTCT TTGTTGGCCAC CTGGTAACAA
CCCAACATCC ATAAGGTTT CGGGTATTC TTGGTGTGTC ACTTAGTATC GATAGTCAA CGACACCCGT TCCTTGGAGA AAAACGGGTG GACCATTGTT

2201 AATTTTATGT CTGTTAAATT TTCTCTGCTA TTAAAAAAA AAAAAAAA A
TTAAATACA GACATTAAA AAAGAACGT AAATTTTTT TTTTTTTTTT T

1 CCCACGGTC CGCTGAATGT ATGTTGGTTA GAAAGTAGCC TTTCTGCTTC CTGCCCCATGG CCAGTTCTCC ACCCTCTCTT TGGTGGTCTT TGTGGGGAGG
GGGTGGCAG GCGACTTACA TACAACCAAT CTTTCAATCGG AAAGACGAG GACGGTACG GGTCAAGAGG TGGGAGAGAA ACCACAAGAA ACACCCCTCC

101 GCACTGTGGT TTGTCGAGC CTTGGACTTC GAGGGCTCC CAGAACCCAG GATCACCGC CTCCTGCTG TTTGCTTCAC TCCTTCCCA GGGAGGACTT
CGTGACACCA AACAGGCTCG CTGACCGAG CTGACCTGAAG GGACCTGAAG CTCCTCGAGG GTCTTGGTC CTAGTGTG GAGCACAGC AACGAAAGTG AGGAAGGGT CCCTCCTGAA

201 GGGACTGTCC TGTGTGACAG GACGGATCTG AGTTCCCGAA GCAAACCGAG TCACCCACATA GATAGCTAGT TTAACAAATG TTTAAATAA AGGGCACCTC
CCCTGACAGG ACAGACTGTGTC CTGACATCGC CTGCTCTAGAC TCAAGGGCTT CGTTGGTC AGTGGTGTAT CTATCGATCA AATTGTATC AAAATTATAT TCCCCTGGAG

301 TGTTCACAAA GTGACATCTG CTGACATCTG TTGAGGCTT GATACTCTTA CAAGGTTGA AAAAATGTT GTGTATCCT ATCATGGCTT GGTAGGCTTC
ACAAAGTTT CACTGTAGAC GACACAAACAA AAGCTCCGGA CTATGAGAAT GTTCCAACAT TTTCATACA CACATAGGTA AGTACCCGAA CATCGGAAG

401 TGGTCAACCTC AGTCTGTGG CTCTTAACCTT ATTGCCCCAAC ATATTCTAT TCCCCTCAGC TACATGATAT TGCAGGCAAA AGATGTTGAA AAAAGGACT
ACCGTGGAG TCAGGACACC GAGAATTGAA TAACGGGTTG TTATAAGTAA AGGGGAGTCG ATGTTACTTA ACGTTCTGTT TCTACAACCTT TTTTCGTGA

501 AATTAGTTT AAAATGTCAC TTTTGGTT TTATTCATACA AAAACCATGA AGTTCCTCTCT CTCCTCTCTT CTCCTCTTAAAT CAGATTATGT
TTAAATCAAAT TTATACAGTG AAAAACCAAA AATAAGATGT TTTGGTACT TCAAGAGAGA GAGAGAGAGA GAGAGAGAAT CAACAAATTA GTCTAAATACA

601 TCTTTTTTG TTTTGGTT TAGTGTATCA TGTTATGAG CAGAGTGGAG TTAAACAAATC CTAGCTTAA AAAAACCTA TTAAATGTA GATATTCTAC
AGAAAAAAAC AAAACCAAA ATCACTAAGT ACAAAATACTC GTCTCACCTC AAATTGTTAG GATGAAATT TTTTGTGAT AAATACATT CTAAAGATG

701 GCATCCCTCA GATATTGTG ATATCCCTA TGGCCTTAG TCTGTACTTT TAATGTACAT ATTCTGCTT TGTGTGATT GTAGATTCA CTGGTTAAA
CGTAGGAAGT CTATAAAACA TATAGGGAT ACCGGAATC AGACATGAA ATTACATGTA TAAGACAGA ACACACTAA CATCTAAAGT GACCAATT

801 GAGAGAACAT TGAAAGGCTT ATGCCAAGTG AAAGATGAA TATAAAATAA AAATGTACT TGTATATGG TAAGAGGTTT CAGTTGTCTT TCAAGCTAAAT
CTCTCTGTAA ACTTCCGAA TACGGTTCAC CTTCATCTT ATTATTTTAT TTTACATGTA ACATATAACC ATTCTCCAAA GTCAACAGGA AGTCGATTAA

901 CATGTAGAGA AATATTAG TTGAAGCCAC AAGAGACAGC TTAGGGCAGT TATGTGTTCA AATAACAGAA GAACAGACTT TTTTTTTTTT TAAACCAA
GTACATCTCTT TTATAAATC AACTTCGGTG TTCTCTGTCG ATCCCGTCA ATACACAGT TTATGTCTT CTGTCGAA AAAAAGGGTTT ATTGGTTT

1001 CCCAAACTGT TGGAAACCT CAATAGGCT CTATATGTT TGGAAACAAA GTGGAATTCTT CTTCCTCTTAT ATATGTCTT TCAAAAGAG AGAGAGAATC
GGGTTGACA ACCCTTGGAA GTTATCTGAA GATATACATA ACCTTGTGTTT CACCTTAAGA GAAGAGGATA TATACAAGGA AGTCTTCTC TCTCTCTTAG

1101 AAGCAGATGG CTTAAAGCTG GTCACAGGAT TGCTCACATT CTTTTGGCAT TATGCAATGCCG ACTTAATGT TTGAGAGTGT GTTGCTATTG TAACATCCCA
TTCGTCTTACCA GAAATTGAC CAGTGTCTA ACGAGTGTAA GAAACCGTA ATACGTACGC TGAATTAACA AAACGATAAC ATTGTAGGGT

FIG.-2A

1201 GAGATGAATC AAAAGGGCTC ACCCTCTCAC CCAGGAGC CTTTCAGGCT TATATACACA TGGATGTACA TGTGTGTGAT ATGGATGTGT GCATGCATGT
CTCTACTTAG TTTTCCGAG TGGGAGAGTG GGTCCTGTC GAAAGTCGA ATATATGTGT ACGTACATGT ACACACACTA TAGTACACA CGTACGTACA

1301 TTGTATTTT GTGCTTGCCA CTATACTAT TGCACTCTC TATTGGTT GACTGAAGAG GGTCTTGTG GGACATCT GTGTCCAGT CTTATGGGA
AACATAAAA CACGAACGGT GATATTGATA ACGTGGAGG ATAAGCCAA CTGACTCTC CCTGAAACAC CCTGTAGAGA CACAGGTCA GAAATACCT

1401 AGAAAGCAAG GCTCTGCAGA GAACAGGAAC TAAAGAATCC CTGTGTGATG TGCAATTAA AGAAGGCCTC CGCTTCTG GAAATGTAGA CCAGAATCT
TCTTCTGTT CCAGACGTCT CTTGCTCTG ATTCTTAGG GACACACTAC ACGTTAATTA TCTTCCGGAG GACGAAAGAC CTTACATCT GGTCCTTAGAC

1501 GCGAGGACTG TAGACTGATA CATTATCG TCCTTTCGCT TTTTCCTTC CCTCCCTGCC CCTCCCTCTC TTGTTTATG GATTAACCTG TAACATATG
CGGTCTGAC ATCTGACTAT GTAATAGACC AGGAACGGA AAAGAAAG GGAGGGACGG GGAGGGGAG AACGAATAAC CTATGGAAAC ATTGTATAAC

1601 AACCTTAA AGGAACCAA GAATGCATTA TTACACACAC ACACACACAC ACACACACAC ACACACACAC ACATATAGAG
TTGGAAATT TCCCTGGTT CTTAGTAAAT AATGTGTGTT TGTGTGTGTTG TGTGTGTG TGTTATCTGGT TGTTATCTC

1701 TGTAAAT AGCTTTCTG GGCAAAATCA AACAACTTGT GGCTCTAGGA CGCACATCTG TTTCGTTT TCTTCAGTTG TATATTGACC AGTATTCTT
ACAAATTTA TCGAAAAGAC CGGTTAAGT TTGTGAACA CGCAGATCTC CGGTGTAGAC AAAGGAAAAGAAGTAAAC ATATAACTGG TCATAAGAAA

1801 ATTGCTAAA CATAACTCG GGTAGCAAT GTCACTCTCC CATCCGGAG AGCATTCAAG ACCTCCAG TACAGGAACA TCAATGAAGC
TAACGATTT GTATATGAGC CCCATCGTTA CAGTGTAGA AAAGGAAAGG GTAGGACCTC TGTAAGTTC TGGAAGGGTC ATGTCTTGT AGTTACTTCG

1901 ATTATATAC AGGAGAACC ACATCCAAA TGGTCAGTGT CGGCGCTAG GCGAAGGCTA TCTTGTCCA GTCTGTCTC TTGTTGCTCC
TAATATATG TCCGCCACCG TTGCTCTGG TGTTGGTTT ACCAGTCACA GCGCAGATC CGTTCCGAT AGAACAGGT CAGGACAAG AAACACGAGG

2001 TGACCTTGG GGGTGCCT ACCCTGCCT GCCCCACTG TCCCCCTC CCCCCGGGG GATTTTCCA ATAGCCAGT CCCATGTGTC
ATGGAAACC CGACGGTGA AGGGTCTGC TGGTACGGA CGGGTGTGAC AGGGGGAG GGGGGCCC CTAAGGGT TATGGTCAA GGGTACACAG

2101 TTTTCGCA ACGGTATTCA AGCCAATGG ACCTCAGAT AGGGCCCAAG AGCAGGATGA CACAACCTGT GGACAAGGAC TATATTAACT TGATCACTAG
AAAAAGACGT TGCCATAAGT TCGGTTACCT TGGAACTCTA TCCCGGGTTC TCGTCTACT GTGTTGGACA CCTGTTCTG ATATAATGA ACTAGTGATC

2201 TATGAGCTAA TATTAACATG ATCACCCATG AAAGGGCCT GCAAGAGCTG TTAGTGTGA AATATAGTA GAGAGGGGG ATGGCAAGGT TGCTTGTGAC
ATACTCGATT ATAATGTGAC TAGTGGTAC TTTCGGGTA CGTTCTGCA AAATCAGACT TTATATCCAT CTCTCGCCCC TACCGTTCCA ACGAACATG

2301 TTCTGGTACA TGTGAATGC ACACACGCAT GGAGGCAAGC TCTAAATCAC TGCACGTAA CTGTAAGCA TACTTTAAA ATATTTATG TTGTTGAAAG
AAGACCATGT ACAACTTACG TGTGTGCTA CCTCGGTGTA AGATTAGTG ACGTGACAAT GACATTCTGT ATGAAATT TATTAATAAC AAAACTTTTC

2401 CATTTTCTAG TCTTCCCTCT CTTGGGGAG CTGTAACAA GATGGCATGT TGAGATGATT CAAGATGATT TTTTTTAAA TCGCAGAAC ATTAGACAC
 GTAAAAGATC AGAAGGGAGA GAACCACCTC GACATTGTT CTACCGTACA ACACTCCAA GTCTACTAA AAAAATTT AGGGTCTTGT TAAATCTGTG
 2501 CTAAGAACTA AACTTATAA AAGGGATCTT TGAATTGGCC TGTAAACATG GATTAATGTT TACACTTACA GCTGATGATT GGACCGTGT TTATGTTAG
 GATTCTGAT TTGAAATATT TTCCCTGAA ACTTAAACGG ACAATTGTAC CTAATTACAA ATGTGAATGT CGACTACTAA CCTGCCACAA AATACAATCC
 2601 GAAATGCCCTT GTTAACGAACT TTCAATGAAAGC AGATGTAATT AAAGGTTGAT GTGAGGCAAT CTAGAAGGTT GAACAGTGT TTCAAAAGAAC CGAGAGACTT
 CTTTACGGAA CAATTGCTTG AAGTACTTCG TCTACATTTA TTTCCAACTA CACTCGCTTA GATCTTCCAA CTTGTCACAA AAGTTTCTTG CCTCTCTGAA
 2701 ACATTITAGA CCAATCTTA TACATTGTC TGAGCTGAA AGGAGATAAA GATTATTAT TTTTGTCTAT ATCTTGACT TTTCATTAA AATCATTAA
 TGTAATAATCT GTTAGAAAT ATGAAAACG ACTCGATCTT TCCTCTATT CTAATAATA AAACAAGTA TAGAACATGA AAAGATAATT TTAGTAAAT
 2801 TGAAAWMAA AAAAAMAAA AA
 ACTTTWKKTTT TTTTTTTTT TT

FIG._2C

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CCCACGCGTCCGCATATGTCTCCTTGTGAGGATCAACAGCTCGCTGGCAGTGGCGGCTT
ACGAGGATGGGATCCTTAACATTGGGACCTGAGAACCGGAAGGTTCCCTATCTTCGTT
TTGAGCATGACGCAAGAATAACAAGCCCTTGCCTGAGCCAAGAAAAGCCCATTGTTGCCA
CGGCTTCTGCTTTGACGTTGTGATGTTGACTACCTGAAATAGTTCCGAATACTGGGA
CCTCGGAGTTGAAGTTCAAGAGCTGGTTGACTACCTGAAATAGTTCCGAATACTGGGA
GGTACCCCTGTGGCAATAGCCACAGCCGGGATCTGGTGTACCTGCTGAAGGCCGACGACT
CAGCCAGAACCCCTCATTATGTCATGGCCAGCCTGCCACATGTCCTGGATGTCTCAGCCA
GCCAGGTTGCCCTTGAGTGAAGAGTCTAGGATGGGTGTATGAAGGAAACAAGATCCTGG
TGTACAGCCTGGAAGCAGAGCGCTGCCCTCGAAGCTGGCAATGCACTTGGAGACTTTA
CCTGTGTCAACATCCGGATAGCCCTCCCAACCTCATGGTCAGCGGCAACATGGACAGGA
GAGTGAGGATTCATGACCTCCGCAGCGATAAGATGCCCTGCGCTGTCTGCCCATCAGC
TGGGGGTGTCCGCAATTCAAATGGATAACTGGAAAGGTTGTCACTGGAGGCCAGGAGGG
GTGGTGT

FIG._3

1 CCCACGGTC CGCATATGTC TCCCTTGTGA GGATCAACAG CTCGCTGGCA GTGGGGCCTT ACAGGAGATGG GATCCTTAAC ATTGGGACCT TGAGAACCGG
 GGGTGGCAG GCGPATACAG AGGAAACACT CCTAGTGTGTC GAGGCACCGT CACCCGCGAA TGCTCTTACCT CTAGGAATTG TAAACCTTGG ACTCTTGGCC

101 AAGGTTCCCT ATCTTTGCTT TGAGCATGTA CGCAAGATA CAAGCCCTTG CGCTGAGCCA AGAAAAGCCC ATTGTTGCCA CGGGTCTGCA TTGACGTT
 TTCAAGGAA TAGAAAGCAA AACTCGTACT GCGTCTTAT GTTGGAAAC GCGACTCGGT TCTTTTGGG TAACAACGGT GCGGAAGACG AAAACTGCAA

201 GTGATGGT ACCCCAAACGA GGAGGGCAT TGGCATGTGG CCTCGGAGTT TGAAGTTCAAGGAACTACCTGAAAC TGACCTGTTG ACTACCTGAA
 CACTAAACA TGGGGTGTGCT CCTCCCCGTA ACCTCAAGTC TTGACCAAC TGACCTGAACT TTATCAAGGC TTATGACCC

301 GGTACCTGT GGGAAATAGCC ACAGCCGGGG ATCTGGTGA CTCCTGTAG GCGGAGGACT CAGCCAGAAC CCTTCATTT GTCAAATGGCC AGGCCGCCAC
 CCTATGGACA CCTGGCCCC TAGACCACAT GGACGACTTC CGGCTGCTGA GTGGGTCTTG GGAAGTAAATA CAGTTACCGG TCGGACGGTG

401 ATGTCTGGAT GTCTCAGCCA GCCAGGTGCT CTTGGAGTG AAGAGTCTAG GATGGGTGA TGAAAGAAC AAGATCTGG TGACAGCCT
 TACAGACCTA CAGAGTGGT CGGTCCAACG GAAACCTCAC TTCTCAGATC CTACCCACAT ACTTCCTTGG TTCTAGGACG ACATGTGGGA CCTTCGTC

501 CGCTGCCTCT CGAAGTGGG CAATGCACTT GGAGACTTTA CTCGTTCAA CATCCGGAT AGCCCTCCCA ACCTCATGGT CAGGGCAAC ATGGACAGGA
 GCGACGAGA GCTTCGACCC GTTACGTGAA CCTGTGAAAT GGACACAGTT GTAGGCCCTA TCGGGGGGT TGGAGTACCA GTGCCCGTTG TACCTGTCT

601 GAGTGGGGAT CCATGACCTC CGCAGCGATA AGATGCCCT GTCTGGTGTCT GCCCCATCAGC TGCGGGGTGTC CGCAGTCCAG ATGGATGACT
 CTCACTCTA GTTACTGGAG GCGTCACTT TCTAGGGAA CAGGGACAGA CGGGTAGTCG ACCCCCACAG GCGTCAGGTC TACCTACTGA CCTTCCAA

701 CAGTGGGGC GAGGGGGG TGGTGTCTGT GTGGGATTAC CGCATGACCC AGAAGGTGTG GGAAAGTGCAC TCCAGGCACC CTGTCGGCTA TCTCTCCTTC
 GTCACCTCCG CTCTCTCCCG ACCACAGACA CACCTAATG GCGTACTTGG TCTTCGACAC CCTTCACGTG AGGTCCGGT GACACGGGT AGAGACGAG

801 AATAGCCACA GCCTCATCAC TGCCAACCTG CCCTACGAGA AGGTGTGGG AACTCCGAC CTCGACAACI TTGCCCTGTCA CAGGAGACAT CGTGGCTGA
 TTATCGGTGT CGGAGTAGTG ACGGTTGCAAC GGGATGCTCT TCCACGAGC TGCGGGCTG GAGCTGTGTA AACGGACAGT GTCTCTGTGA GCACGGACT

901 TCCATGCCTA TGAATTGCT GTGGGACAGC TGGCCTTCA ACAGTATTAA CACCTGGTCAACGAAAGT CTCGGGGAA GGACAGACGG CGAATGGGGC ACTGTAGTAC CGACCTATGT CGATACTGGA

1001 CGCACTGTCT TTCCCCCATG AGCTGTTCA GAGCCCCCTT CCTGTCGTC ACCAGTACAGAC GTGGAAAGGG CAGTTTACA AATGTTAGAG TTGGAGAGAG
 GGGTGAAGA AAGGGGTAC TGTCAATAAT CCCACACTGG AGTACATCTG CACCTTCCC GTCAAAATGT TTACAACTC AACCTCTCTC CGAGACGTC

1101 ACATGGTGGGG AGTTGGGA CAGTGTCTG TATGACTGTG GCCACACAGC CCTGTCGCC TGTACAGAAC CAGACTCCAT TGTCGGCTTT
 TGTACCAACCC TCAAAACCCCT GTCACAGGAC ATACTGACAC CGGTGTGTG GGACAAACGGG ACATGTCTTG GTCTGAGGTA ACGACGGAA GAGGAGGAGG

FIG.-4A

1201 TCCTCCCT CAGGCTTGG TAGGACTGGC TGATGACTCA GAGTTAACCT TTCCAGGGGT GGCTCCCTCC CCTCAGCCTA TGGCAGGAGT GACACCCCCC
 AGGAGGAGGA GTCGAAACC ATCCGTACCG ACTACTGAGT CTCAAATTGGA AAGGTCCCCA CCGAGGAGGG GGAGTCGAT ACCGTCGTCA CTGTTGGGGG
 1301 CTCGTCCAT AGGCCAGGG CACAGGGCT TCACCTGCAC TGTCTCCTGG GTGTGGTGT GAGGGTGGAA CCAGAACATC ACACGCATAG GCAAGCGTCA
 GAGCAAGGTA TCCGGTCCCT GTGTCCCGGA AGTGAACGTG ACAGAGGAC CACACCACGA CTCCCACCTT GGTCTTAGAG TGTGCGTATC CGTTCGCAGT
 1401 GCCTCCAAGC TGCTCCCA GCTGTCAAGCC TCCCAGCTG TCTCCTCCAG GCACCCCTCCA GNGCAGCCCC TCCTCTGGG TTCAACACCGT TGATAATTAT
 CGGAGGTTCG ACGGAGGGGT CGACACTCGG AGGGTGTGAC AGAGGAGGT CGTGGGGAGT CACCTCTGGG AGGAGACCT AAGTGTGGCA ACTATTAATA
 1501 AGGGCCACCT TACCTGTAGG AGCTGTCTG TCCTGTACAT GTGCTATGAA GGAGAACGCC ATCCCTTCCTG CAGAGGGAA GGGTCAATGC ACAGGGATAG
 TCCCGGTGGA ATGGACATCC TCGAAAGAC AGGGACATGTA CACGATACTT CCTCTGTGCG TAGGAAGGAC GTCTCCCTT CCCAGTAACG TGTCCTCTATC
 1601 GGTCAAGTC CAAAGCCTAGC CGGTGGTGTG TCTTCTGAC AAACGAGGC ATAGCTCACC CACTCTGCCT TCAGAGTGTCA ATGGACAAT CCACACATAG
 CCAGTCAGAG GTTGGATCG GCCACCACAG AGAAGGACTG TTTCGTCGG TATCAGTGG GTGAGACGGG AGTCTCACAG TACCTGTATA GGTTGTATC
 1701 TGGCCAGGAG ACCCAGTCAG AGCTCTTCAG AATCCCCACA GACCAAGGCA CTAACACACC TGACACAGGG CCACCAAGGTC TCAGGGAGACA AAGTTCTCT
 ACCGGTCTC TGGGTCACTC TCGAGAACGT TTAGGGGTG CTGGTCCGTG GATTGTGTGG ACCTGTCTCC GGTGGTCAG AGTCTCTGT TTCAAGGAGA
 1801 CCCAGGGAAT ACCAGCTCAA AAAACAAAGTG GGTGGCAA CTCCACATTG GGCTCTGCGA GAGCAAGAAA AAAGAGGGGG GTGGGGGAGC TCCATGGGGT
 GGGTCCCTTA TGGTCGAGTT TTTCGTCAC CCGAACCGTTT GAGGGTAAAC CCAGACGGCTT CTGGTTCTTT TTCTCCCTC CACCCCCCTG AGGTACCCCA
 1901 GGATCCAGG CTGGCAGG CAGGGTGTG GAGGGCCTGA AGGGGTGTGC AGTGCCTCC CGAGGCCCTG GTGGTCTCT CCTGTGTGCTT GGGATGGAGT
 CCTAGGGTCC GACCGTGTCTC CTTCAGGACT CTCCCGACT CTCACACAG TCACGGGAGG GGTCTGGGAC CACAGAGGA GGACACACGA CCCTACCTCA
 2001 CTAGTGGGTT TGGCATCT TCTCAGATCT AGAGTCAGA ACCGTAACCT CGGAGGGG TACGTGTTCA CGGGTCCCCCT CGAGTGGGG GAGAACGACC CGACCGGGG
 GATCACCCAA ACACCGTACT AGAGTCAGA ACCGTAACCT CGGAGGGG TACGTGTTCA CGGGTCCCCCT CGAGTGGGG GAGAACGACC CGACCGGGG
 2101 CCTGCTGGCC TGGCTTGGT GTGTCCCTCAC TCGAGCATT CCAAGTCCACTA GGTGCTCTAA GGAGACATTT CTGTAGAGA ATTGGCTGT GGGTCAGCT
 GGACGCCGG ACCAGAACGA CACAGGAGTG AGCTGTAAG GTCAAGGATT CGACAGGTGA CCTCTGTAAA GACAGTCTCT TAAACCGACA CGCCAGTGA
 2201 CCTTTCGGG CTTGGCAGCC ATGAAAGGCC ACTGAAGAGC AGAGGTGACT AGAGTACTT CAAGCATACA TGCCCTCTA GCCCCAAATC CCTGCCCT
 GGAAAGACCC GAAGGTGCGG TACTTTCGG TGACTTCTCG TCTCCACTGA TCTCATCAAA GTTCGTATGT ACGGAAGAT CGGGGGTTAG GGACGGGGGA
 2301 ACCCCCACAG AGCATCTGTC CTCGGTGGCT CCTGCCACTG CACCTGCTC CAGGGGGGG GACAGGTGG TGCCCTCTGAA GCCAGAAGAC
 TGGGGTGTG TCGTAGACAG GAGGGACCGA GGACGGTGTAC GTGGACGAGG GTGTCGGACC GAGGGACACTT CGGTCTCTG
 2401 ACCAGGACAC AGCCCTGGGA GCGAGGGGTG GTCACACATC TGGAGCTTCA CTTTGGCCCTT AAGGGGCCAC TTCTGCTCTG TTATTAAGG TTCTACACTG
 TGGTCTGTG TCGGACCT CGGTCCCCAC CAGTGTGTAG ACGTGAACG GAAACGGAA TTGCGCGGTG AAGACGAGC AATAATTCC AAGATGTGAC
 2501 AAAAAAAA AAAAAAAA AAAAAA
 TTTTTTTTTT TTTTTTTTTT TTTTTTTT

FIG.-4B

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1 CTCCAACAGC GCAGGGCAGA GCGGCTGGG CCGCGGGC CCGGAGCCAC GACCCCTCCCT GGCCGCTTT GTCTACTGGC CGTGCGGCC GGAAACCGCCA
GAGGTGTCG CGTCCCCTGT CGCCGACGCC GCGGCCCTCG CGCCTCGT CGCCTGGG CTGGGGAGGA CCGGGGAAA CAGATGACCG GCACGGCGG CTTGGCGGT

101 CTCTCCAGGG CGGGGACGC GCGGGCAGCT GTCGGTGACA GCTCCTCCCT ACCGCAACCC TCCGGGGGG AGGGCGTC GGGGGGGCC CTGCTAGCC
GAGGGTCCC GGCCCCGGCG CGGGGCTGCA CAGCACTGT GAGGAGGA TGGCTTGGG AGGGGGGCC TCCCGCAG CCCGGCCGG GACGATGGG

201 GCGACCGCAA GCGCCGGCTC GCGGATGAT GCCCCGGAG CAGGGGACC CGGCGTTCCTC CGACCGCTGC GAGGGCCTC CGGTGGGCC GCGTCGGGAG
CGCTGGCTT CGGGCGGAG CGCCTAGCTA CGGGGGGTCA GTCCGGTGTG CTCGGGGAG CTCCGGAG GCCACGGGG CGACGCCCTC
1 M P P Q Q D P A F P D R C E A F P V P P R R E

301 CGGGTTGGAC GCGGGGACG CGGGGCTGGG GAGGCCGGGG GCGGAGGGGG GCGGAGGGG GCGGAGGGG GCGGGCTCAA GTGGGTGCTG GTGGGGAGC
GGGCCACCTG CGGCCCTGCG GCGGGGACCC CGGGGGGGG CGGGGGGGG CGGGGGGGG CGGGGGGGG CGGGGGGGG CGGGGGGGG CGGGGGGGG
25 R G R G G R G P G E P G G R G R A G G A E G R G V K C V L V G D G

401 CGGGGGGG CAAAGACGAGC CTGGTGGTGA GTTAACACCAC AACGGGCTAC CCCACCGAGT ACATCCCTAC TGCCCTTCGAC AACTTCTCCG CGGTGGTGTG
CGGGCACCC GTTCTGCTCG GACCAACACT CAATGGGTG GTTGGCGATG GGTTGGCTCA TGTTGGATG ACGGAAAGCTG TGGAAAGGGC GCCACCAACAG
59 A V G K T S L V V S Y T T N G Y P T E Y I P T A F D N F S A V V S

501 TGTGGATGG CGGGCCCGTGA GACTCCAACCT CTGTGACACT GCGGGACAGG ATGAAATTGA CAAGCTGAGG CCTCTCTGCT ACACCAACAC AGACATCTC
ACACCTACCC GCGGGGCACT CTGAGGTGTA GACACTGTGA CGGCCTGTCG TACTTAAACT GTTCGACTCC GGAGAGACGA TGTGGTTGTG TCTGTAGAG
92 V D G R P V R L Q L C D T A G Q D E F D K L R P L C Y T N T D I F

601 CTGCTTGCT TCAGTGTGCT GAGCCCCCTCA TCCTTCCAGA AGTCACTGA GAAATGGGTG CCGGAGATT GATGCCACTG TCCCAAAGGC CCCATCATCC
GAGGAGACGA AGTCACAGCA CTCGGGGAGT AGGAAGGTCT TTGCACT CTTAACCCAC GGCCCTCTAAG CTACGGTAC AGGGTTTCGG GGGTAGTGG
125 L L C F S V V S P S S F Q N V S E K W V P E I R C H C P K A P I I L

701 TAGTGGAAC GCAAGTGGAT CTCAGAGAAG ATGCAAGT CCTCATGGAG TTGGACAAAT GCAAAGAAAA GCCAGTGGCT GAAAGGGGG CTAAGCTG
ATCAACCTTG CGTCAGGCTA GAGTCTCTTC TACAGTTTCA GAGTAACTC AACCTGTTTA CGTTTCTTTT CGGTCAACGGG CTTCCTGGCC GATTGAC
159 V G T Q S D L R E D V K V L I E L D K C K E K P V P E E A A K L C

801 CGCGGAA ATCAAAGCCG CCTCCTCAT CGAGTGTCA GCGCTTGACTC AAAAACCT CAAAGAGGTC TTGATGCGAG CCATCGTCGC TGGCATTCAA
GGGGCTCCTT TAGTTGGC GGAGGATGTA GCTACAAAGT CGGAACCTGAG TTGTTGGA GTTCTCCAG AAAACTACGTC GGTAGCAGCG ACCGTAAGTT
192 A E E I K A A S Y I E C S A L T Q K N L K E V F D A A I V A G I Q

FIG._5A

901 TACTCGGACA CTCAGCAACA GCCAAAGGAAAG TCTAAAAGCA GGAACCTCCAA AACCTCTCCA AGTCCTGGTG GAAGAAGTAC TGCTGTTTG
 225 Y S D T Q Q Q P K K S K S R T P D K M K N L S K S W W K K Y C C F V
 1001 TATGATGCTG GCAAGACACC CAGAAAGGCT ATTTCAGAT GAATCGATA TTAGAGCTA TATTAGCTA AACAACTCTT TTACTGGCT AGAACCTATA
 ATACTAGGAC CGTCTCTGGG GTCCTTCCGA TAAAGCTCA CTTAGCTAT AACATCGACT ATAACTCGAT TTGTGAGGA AAATGACGA TCTGGATAT
 259 O

1101 TCGAGAGTGT GTGGTATGTT ATTATAGGAG GAGCTCTCAA TTTATGTT TCTTCTGCG TTTAATTTC TTGTTGTT GAGCTTGGG ATGAGATCT
 AGCTCTACA CACATATACA TAATATCCTC CTCGAGAGTT AAAATACATA AGAAAGACGG AAATTTAAAAG AACAAACAA CTCGAATCCC TACTCTATGA
 1201 TATGCAAGAT ATTGTTGAAG TAAATTAAC ATTTCCTACA TCTCTGGAAA TTAGAGTTC TAGACCTCTG GTTAATTAT ATCTAATATG AAGAAGACAC
 ATACGTCTA TAAAAACTC ATTAAATTG TAAAGTGT AGAGACCTT AAATCTCAG ATCTGGAGAC CAATTAATA TAGATTATACT TTCTCTGTG
 1301 CTCTAAATCTG GATGTTAAGA ATGAGTCT GCTACATTAT ATGTCACAGA AGAGCAAAAG GGAGGAACAC TAGGTTAAC CCTCTCTGTGA TTAAGGGCTA
 GAGATTAGAC CTACAATTCT TACTTCAGA CGATGTAATA TTACATGTC TCTCGTTTTC CCTCCCTGTG ATACCAATTG GGAGAGAACT AATTCCCGAT
 1401 CTTAATGAC AGTCATTAT GTACACAGGT CAACCATGGT ACAATAGTT CTTAGCTTGT AAACCTCCATG CAAACCATGC CTTTTTTTA AGGAGCAAA
 GAATTACGTT TCACTAATA CATGTGTCCTA GTGGTACCA TTGTTATCAA GAATGCAAC TTGAGGTAC GTTGGTACG GAAAAAAT TCCTCGTTT
 1501 ATCTGAGAAA AAAAGTGAGA GACCTCTGCC TACAAAACTT CAAACCACTC ACTTTTGTCATGCTAATGCTAATA CCCAGTTACT TATGATTAA AAACAACCAA
 TAGACTCTT TTTCACTCT CTGGAGACGG ATGTTTGAA GTTTGGTCAG TGAAAACAGT TAACGATTAT GGGTCATGAA ATACTAAATT TTGTTGGTT
 1601 CAGAAACAT CCCACAGACT GTATGGCACT CTGTAATCAA AAAAGGAAAC TTCTTATTG GGACTTTCTC TTCTTAGTC AGTTGTGTTG ACACATATGA
 GTCTTTGTA GGGTGTCTGA CATAACGGTG ACATCAGTT TTTCCCTTG AAAGATAAC CCTGAAAAGA AAGAATAGG TCAACACAA AC TGTGTATCT
 1701 ACACAGACAA AGTGTATGC GGAGGAAAGC AAGTGTGGT CAGTAGTTTC ATGTTAGG GAGTGGTCC TGGGGAGTC AGAAAGTGC ATTGCTTTC
 TGTGTCTGTT TCACTAAGC CCTCCCTTCG TTCAACACCA GTCATCAAAG TACAAATCC CTCACCAAGG ACACCTCTAG TCTTCCTAG TAAACGAAAG
 1801 GGTACTGTAA TACATGCCAA AACATGCTC AATCTAGGT AACGAGGGCA ACAGGGAGCA CCTGTCCTGGA TTGTTTTAA ACCTCCATAC TCAAGCTGTC
 CCATGACATT ATGTAACGTTGTT TGTGACGGAG TTAGATCCA TGTCTCCCTCGT GGACAGACCT AACAAAAATT TGGAGGTATG AGTCGACAG
 1901 TCTTCGGCAG GGAGGTGAAT ACTCTTGAAT GGGCAACAGC AAGTGTGTTGT GGGACACAAAC ACAGATAATT TTTCTTAAG TCGACCAAGA TGACTTCTC
 AGAACCGTC CCTCCACTTA TGAGAACTT CCGGTTGTCTG TCACAAACA CCCTCTGTG TGCTCTTAA AAAAGAATTG AGCTGGTTCT ACATGAAAGAG
 2001 TGTGTGCA CCACTGCAACA CAGATACATA GGTCTGTATG GGTGTGATTG CTGTTGATTG AGACTTCAC ACCATTAATG GGGAAAGGG
 ACACACGGTGT GGGTACGGTGT GAGTACGGTGT GTCTATGTT CAGATACATA GGTCTGTATG TGTGAAAGTAC CGACACATAAC GACAACAAAC CCCTTTGCG

FIG. - 5B

2101 TGGCCACAAA AACAGATGCT AGGAAGCTTG CTTGTCCTCTT CTTGTTGACC CTTTTTTGAA CCAACATCTT TTTTATTATA TTCAAGCTAT GTTTTAAGT ACCGGTGTGTTT TTGCTACGA TCCCTCGAAC CGAAGGAGAA GAACAACCTG GAAAACACTT GGTGTAGAA AAAATAAT AAGTCATCA CAAAATTCA

2201 GTATCTAAT ATATACATT TTTAGGACAT CTTAAATCTA ACAAAAAAT AAAATGAAACA TCTCTTGAAA CCTGTTAAA CAACCAAGTT AAGCCACAGA CATAGAATTA TATATGAA AAATCCCTGA GAATTAGAT TTGTTTTTA TTACTCTGT AGAGAACCTT GGACAATTG GTTGTCTAAT TTGGGTGTCT

2301 TGGCTTCAG GGCAGTAGCA GCAGAGGCCA GTGGACTCTG AGGACTCCTG AGGGGGGGGG CGTGTAGCCA GCCAGGTGCA TGCCGGGACC ATGGCCCA ACCGAAAGTC CGGTCACTGTT CGTCTCCGGT CACCTGAGAC TTCTGAGAC TCCCTGGAC GCACATCGGT CGTCCACGT ACGGCCCTGG TACGGGGGT

2401 TACCTGGCTG CTTCTGTGA CAGTGAATA CATCCCTCAA GTGGCAGCT GTAGGGCTG AATCTCTGG AGAAAAGGT GCCATCTCAG GAGAATAGCT ATGAACCGAC GAAGGACACT GTCACTTTAT GTAGGAAGTT CAACCGTCGA CAATCCCGAC TTAGAAGACC TCCTTTCCA CGTAGAGTC CTCTTATCGA

2501 TTACTCTGG TAGGAATGCT TCCGAGACAC CACAAGGAG CCTGAACACT CAGTTCAAGG GTCTGGCTTG CGGTGGTGA CCCAGGCCA CCAAGTCAC AAATGAGACC ATCCTTAGA AGGCTCTG TGTTGTCGGTC GGAACCTGTA GTCAACGTC CAGCCCGAAC GCCACCCACT GGTTTCAGTG

2601 ATCCACAACT AATGAGGGAA ATCTGTAAG CCAGTTAGAT AGAAGAGTT TATTTTCTG TGTTGTTTGT GTTGTCTTTT TTATGTTAAA AAGAAATCCA TAGGTGTGA TTACTCCCT TAGACATTTC GGTCAATCTA TCTTCTCAA ATAAAAGAC ACCCAAACAA CAACAGAAAA AATACAATT TTCTTTAGT

2701 GTTTGTGTT TTCTATGAA AAGTAAG ATCAGGTTAT ACTTAGGTT AGGGGTCTA TTATTCCTG TTAGTAATA AAATAACAA ATTCTTTGT CAAACACAAA AAGATATCTT TTCTATTT TAGTCAATA TGAATCCA TCCCAGAT AAAAAGGAC AATCATTAT TTATATTGT TAAAGAAACAA

2801 TTAACAAAG ATTAATCTT AAACCACTAA AATACATAGA CTGATTGATT ATTCAACACA TTGAAATTGA TGTGGTCTAC AACCTTAAC TACAGCCAGTA TCAAAGGACT TCGTAAATCA

2901 TACAACCTGA AGGATAAAA TGATTGTGG AAATGCTAA ATAGACCTA ACTGAATACA GTCTCATCTT GCGGGCCTG GCTTACCTAT CTGGAAAG ATGTTGGACT TCCTTATTT ACTAAACACC TTAGGAATT TTATCTGGAT TGACTTATGT CAGAGTAGAA CGGCGGAC CGAATGGATA GACACCTTC

3001 CTAGGGCTCC CAGGGGGCT CTGGCTCT GTGGCCTGGA GTGTGGGGGG GGAAGATGAG TTATTTAACT GTAAAGGGAT TTGAAACACT ATTTTTATAT GATCCGAAGG GTCACCCCGA GACGGACAGA CCACGGACCT CACACCCCT CCTCTACTC AATAAATTGA CCATTGCTA AACTTGTGA TAAAAATATA

3101 TAAAGTAAT GGATGGAGT ATAGTGCATA TTCAATTAA AGATAGAACAA CAAACCTGA AAGAAGTTT ATGGCTGTGA CAGTGTATGG GGCTGCAGTT ATTTCATTTA CGGTACCTCA TATCACGTT AAGAAAAAT TTATCTCTGT GTTGTAACT TTCTCTCAA TAGCACACT GTCACATACC CGACGTCAA

3201 GGTCTCCCTG GAGGGGACTT CCACACCTCC TGCCCTTAGG CATGGGTGG AAAGTCTCA GTGAAGTACA CCTGTTGGC COAGTTCTGA AAGCTTTATA CCAGAGGGAC CTCCCCCTGAA GGTGTGGAGG ACGGAAATCC GTACCCAC CTTCACGAGT CACTCTATGT GGACACACCG GGTCAGACT TTGAAATAT

FIG.-5C

3301 CAGTTGAAATT TTAAGTGGGG TTGATAACAC CTTGGACGT TAGTGTAA AATCTAGTGT GTTGACCTTT AAATGCCAG TTTTAAAT ATTATGCTGC
GTCAACTTAA AATTCAACCC AACTATTGTC GAACTGTG ATCACAAATT TTAGATCACC CAACTGGAA TTACGTGTC AAAAATTAA TATAACGACG

3401 ATTATATAGA ATAGTAAAGG TACGATTATA CTTGGAGATT TTGATTCATT TTCTCCATT TTATTCTTC GTGAAACATAG AGTTGGGG CGAAATGTT TTAAAGTAT
AAAATATCT TATCATTTCC ATGCTAATAT GAACCTAAA AGGGGTTAA AATAAGAAG CACTGTATC TCAAACCCCG GCTTTACAA AAATTCTATA

3501 GTGTTGAGT TAAATATAAA GTTGGTTCAC TTCAAGCTA AAAAATTGTT AACTTGCAG CTTGGTATTG CAGAGAAAGT TTATAAGAA TTTTGCTTTA
CACAAACTCA ATTATATT CAACCAAGTG AAGTTTCGAT TTTTAAACA AAACCAACTCA ATTATCTTAAACAA GTCTCTCTA AAATATTCTT AAAACGAAAT

3601 GAGAATGCCA CTTGGCTGA ACTACAAAGTG TAGGCCACCA TTATAATTAA TAAATCAGC ATACTTCMAA ACTGTTGTT ATCTCTTGT ACCATGTTG
CTCTTACGGT GAAACCGACT TGATGTTAC ATCCGGTGGT AATATTAAT ATTAGTCG TATGAAAGTT TGACAAACAA TAGAAACAA TGGTACATAC

3701 TATAAATGGA CCTTTATAAA CCTTGGTTC TGCTTGACAG ACTCAAGAGA AACTACCCAG GTATTACACA AGCCAAATG GGAGCAAGGC CTTCTCTCCA
ATATTACCT GGAAATATT GGAACAAAGG AGCAACTGTC TTGTTCTCT CATAATGTT TGATGGTC CTTGGTTTAC CCTCGTTCCG GAAGAGGGT

3801 GACTATGTA ACCTGGTGC TTACCAAGTT GTGCTTTCT GTTTCAAGT GTAAATGATG TTGAGCAGAA TGTGTTGACTT GAAAATGCTA TAAGTGAGAT
CTGATAGCAT TGGACCACGG AATGGTTCAA CACGAAAGA CAAAGTTCA CATTACTAC AACTCGTCTT ACAACATGAA CTTTACGAT ATTCACTTA

3901 GGTATGAAAT AAATTCTGAC TTATGAAAT AAAAATTTAA AAAAATTTAA AAAAATTTAA AAAAATTTAA AAAAATTTAA AAAAATTTAA
CCATACCTTA TTTAAGACTG AATACTTATA TTTTTTTTTT TTTTTTTTTT TTTTTTTTTT

FIG._ 5D

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mouse.cl.65 1 **MAPQQGRP** **PARCE** **APPVPPRERGGRRG** **ARGPVG** **SGGRAGGAE**
human.cl.65 1 **MPPQQGDP** **AFPDRCE** **APPVPPRERGGRRG** **GRGPGE** **GGRAGGAE**

mouse.cl.65 51 **RGVKCVLVDGAVGKTSLVVSYTTNGYPTTEYIP** **TAFDNFSAVVSVDGRPV**
human.cl.65 48 **RGVKCVLVDGAVGKTSLVVSYTTNGYPTTEYIP** **TAFDNFSAVVSVDGRPV**

mouse.cl.65 101 **RLQLCDTAGQDEFDKLRLPLCYTN** **DIFLLCFSVVSP** **TSFQNVGEK** **KWVPEI**
human.cl.65 98 **RLQLCDTAGQDEFDKLRLPLCYTN** **DIFLLCFSVVSP** **SSSFQNVSEK** **KWVPEI**

mouse.cl.65 151 **RAHCCKAPIILVGTQSDLREDV** **KVLIELDKCKEKPVPEEEAAKLC** **AAEEVKA**
human.cl.65 148 **RCHCCKAPIILVGTQSDLREDV** **KVLIELDKCKEKPVPEEEAAKLC** **AAEEVKA**

mouse.cl.65 201 **VSYIECSALTQKNLKEVFDAAIVAGI** **QHSDS** **QLOPKKS** **SKSRT** **PDKV** **RDL** **S**
human.cl.65 198 **ASYIECSALTQKNLKEVFDAAIVAGI** **QYSDT** **QQPKKS** **SKSRT** **PDKV** **MKNL** **S**

mouse.cl.65 251 **KSWWWRK** **YCCCLA**
human.cl.65 248 **KSWWKKYCCFV**

FIG. - 6

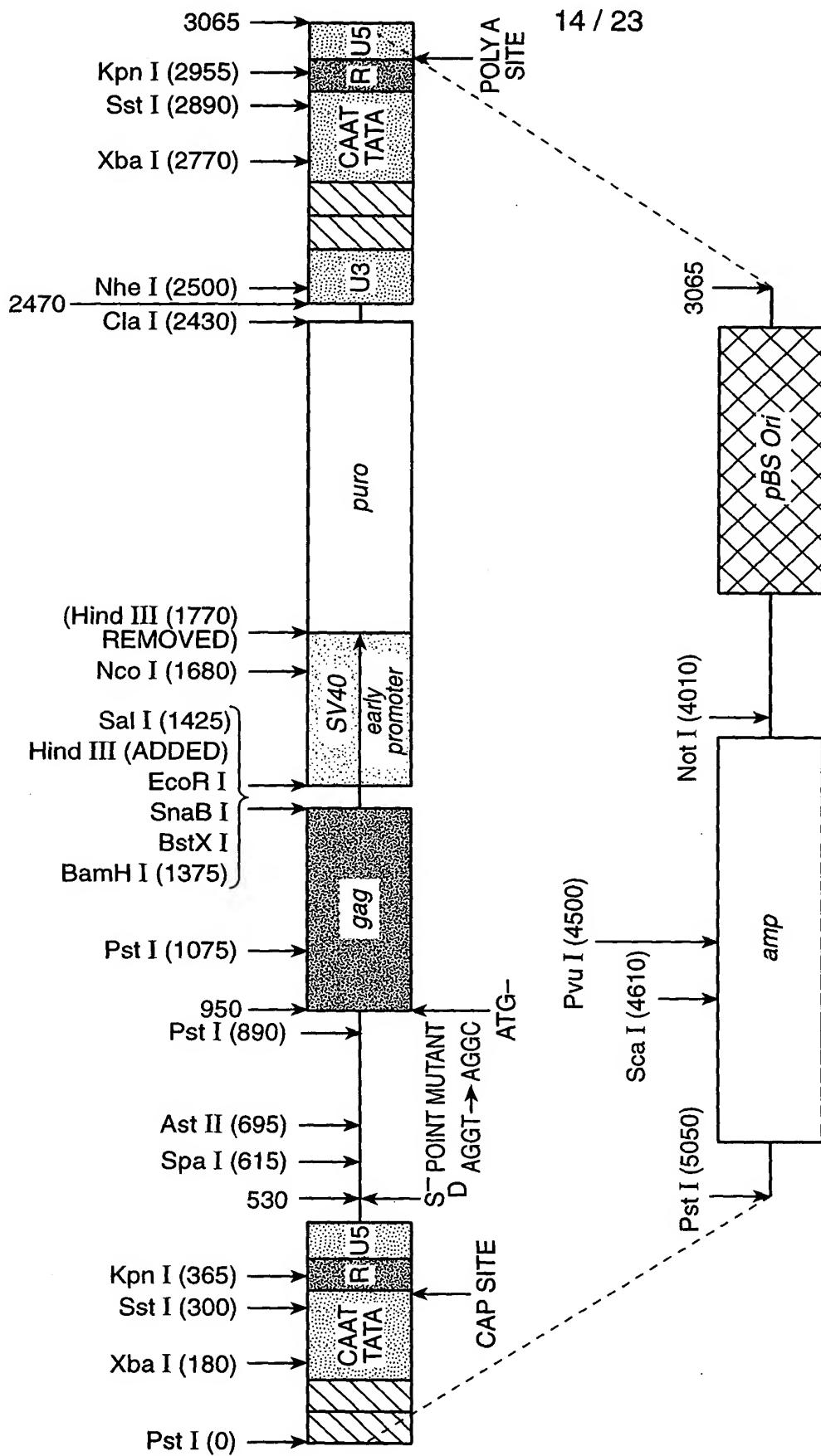
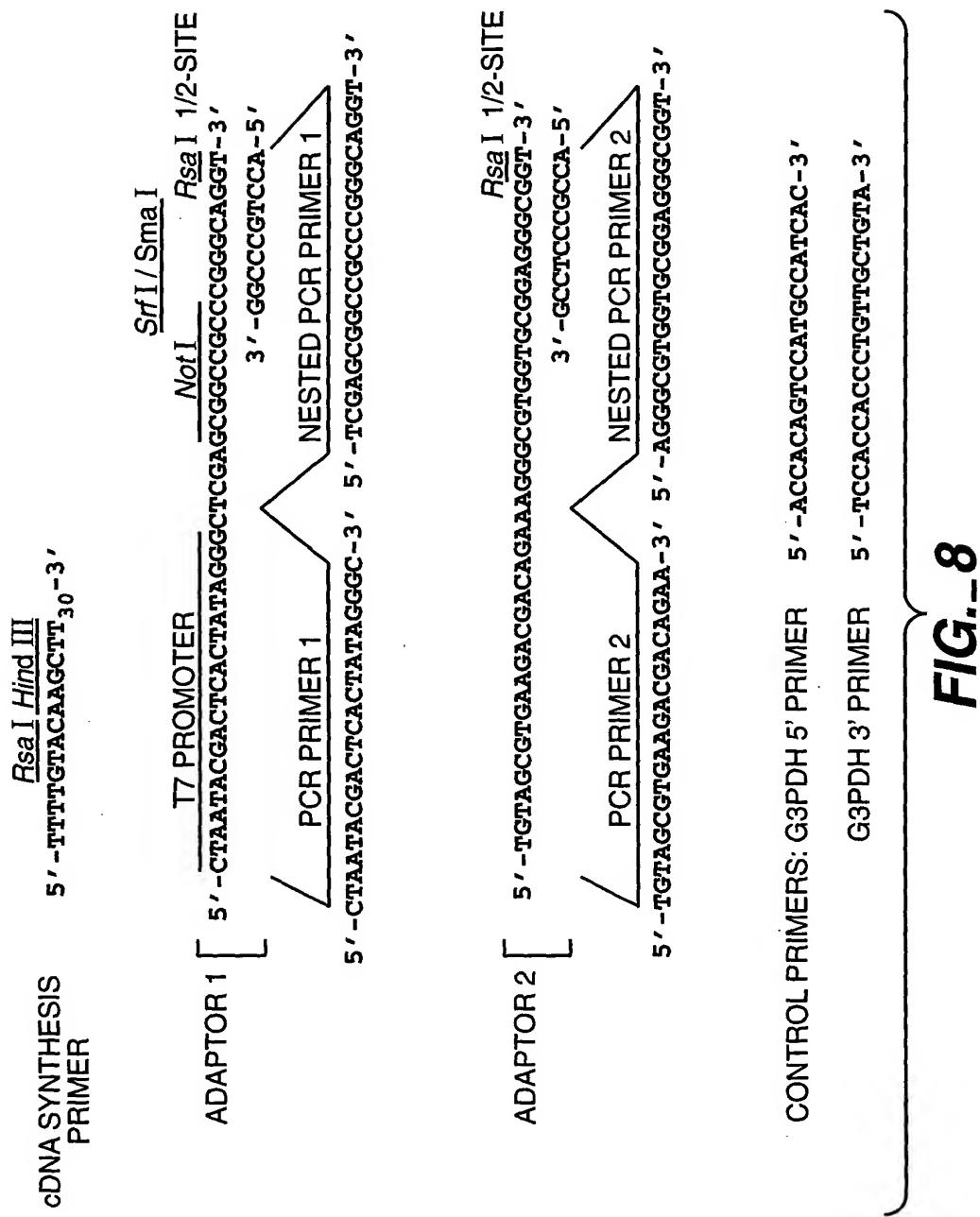
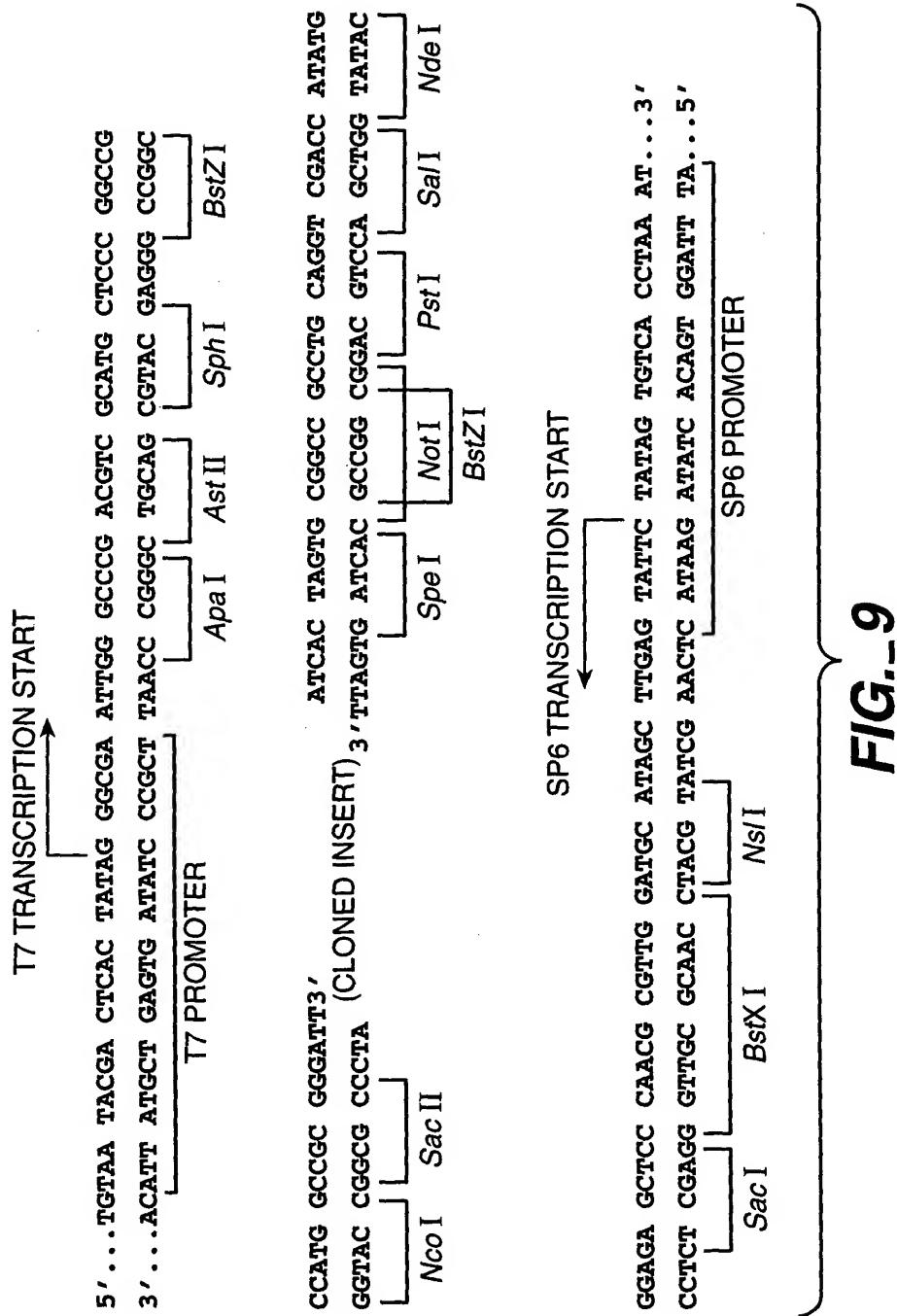


FIG. 7





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5' - CCCACCGCGTCCGCGCGTGGGCAAGACCAGCCTGGTGGTCAGCTACACCACTAACG
GCTACCCCCACCGAGTACATCCCTACGGCTTCGACAACTTCTCGGC
CGTGGTGTCTGTAGATGGGCGGCCTGTGAGACTCCAGCTCTGTGACACTGCAGGACAGG
ATGAGTTGACAAGCTGAGGCCCTCTGCTACACCAACACAGACATCTCCTGCTGTGCTTC
GCGTGGTGAAGCCCCACATCCTCCAGAACAGTGGCGAGAAGTGGTTCCAGAGATTGAC
GTCACTGCCAAAGGCCCCATCATCCTGGTCGGGACACAGTCGGACCTCAGGGAGGACGTCA
AAGTGTCTAGAACCTGGCTCTGCAGGGCATCTGTGCTGTAAAGCAGGAGGAG
GTGCTTGCTGGGAGCTTAAGTGTGCTGGCTCATATCGTCCCCTTGAAGAATTG
GGCCACCTGAGAGGCCATAGTGTAGGCTATGGACACACACACACACACACACACT
ACCAAAATGCCTGCCTGTACACACACACACACACACACACACACACACT
GGCTGGTTGCTGATGAAACCCCTAGACCAACCCCTCCACCCCTCCCCAAGCATGGC
TGCAAGTGTCAAGGGCACCACACCTCCTCTTGACATTCTTGAAACAGACATCATTT
TGTAGGATCTAATTATACATTTTCAGGTACAAAATGTGGGATGAACATACT
TTGAAACCCAGTGCCTCAGGGTCCATTGACTAGGGAGGCAGTGTCTAGGGGACAGGTAT
GTGCAAGGCCTTACCCACCAGTGGCTCTCGTCAGGTATGTTGTGGCACTTGTCTT
TAAGGTGAGGGTCTTATGACCGACTGTTCTGAGACAGCCCTGTGTCAGGCAAGCTCTT
CACAGGGTTGAGGTATTCCAAGACGCCATAGGAACCAAGCAGTGAATCATAGCTATCAGT
TTGCTGTGGCAAGGAACCTTTTGGCCACCTGGTAACAAAATTTATGTCT
GTAAATTCTTCTGCTATTAAAAAAATCAATCTACGTTCTGTAGGAAA
AAAAAAACAAAGTAAAAGAACAGGCCATTTCAGGTCAAAGGCTTCTGCTG
GTAAATGGGACTGAAGACTTTCTACATCATTATTAAAAGGCTAATTGCTGAACCA
CTAGAGTATATGAACCTGTTGTGAATGATATTGCCATAGTCTCTGAGGTGTT
CCTTGTGGCCTGAGTGGTAACATTGTTGCTTATGGAGATGCTGTAACGTACCTAGTGA
TTATCCTATTGTGCATGGCTGTGGAAAGCCAGCGTACAAGTGGGCTTGCCTGCCCTGTGTA
CAGAGGGTGGGTGGAAAGAGTGAATTATTAAATTAAATGTTATAATAAGCCAATGTAGTTGA
GACCAAGGAAATGAGCATTGAGAACACAAACTTGAAGTCTGGTGCAGGGTTGTGGACCTC
ACACCCCTGTCTGAGCCACCCGGAAGTGACATAAAGGACGCTGTGATCAAGT
TCTGGACACTTTCTGGGATGCGTACCACTGGACTATTATGTACAAATCTAGTGGTT
GACGCTGCCCTGCAAGTTCAATGTCCTGCATCCTATGAAGTCATAATGTCTGAC
TGTACTGGAGGTTTCTGCATTTCAGGTTCTGAAAGTCAAGTCAGGGTCTCATCAAAGCTGAGAA
TCTAAACGCATGTGCCTGGTGGACGTCAAGTCAGGGTCTCATCAAAGCTGAGAA
GTGGCTGGAATGTTCAAGCTGGTGTCTGGGAGGATCCTGTGAGCTATGTAGA
GAGGTGGCTCTCAGCCTGACTCAGTGTGGCTGAACGAAGTACCTGCAGAACACACGGT
AGCAGGCTCCAAATCGTACCTCAAGCATGCGTGCAGCAAACCTCCGAGAAACTCC
GTTTCTGCTGGCAGACGTGTGAGCAGCTACCCAGAAGTCTCAAGCAGGAGCCTCG
CTCGCTGGCTCTGCAAGGTGCCTTATGACCTGTGCTCTCTTTCCGTGTC
GATGTTGGACAGGATCTGTACTTGAAACATACTACAAATGAGTTACTATGAAATAATT
TGACCTGTGGACCGAAAAAA

FIG._10

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5' -CCCACCGTCCGACGTGACCAGTTATATTGCTATGAAAATGGTGGAGATGCCTCGTA
GAAGGCGAGTGCTGGGTGCACATGTGACATTTCAGGGAGCAGTCATGGTGAGACCA
GAGAGGGCTTAGCTTGAGACTGGCTCTGCAGGGCATCTGTGTCCTGCTGTTAAAAG
CAGGAGGAGGTGCTTGCTGGGAGCTTAAGTGTGCTGGGCTCATATCGTCCCCTTGCA
AGGAATTGGGCCACCTTGAGAGGCCATAGTTGATGGCTATGGGACACACACACACTTTT
CCTTAAGTCACCAAAATGCCTGCCTGTACACACACACACACACACACACACACAC
ACACACACACTGGCTGGTTGCTGATGGAACCCCTAGACCAACCTCCACCCCCACCCCT
CCCCAAGCAGTCAGGCTGCAAGTGTGAGGGCACCACACCTCCCTTGACATTCTTG
ACAGACATCATTGTTAGGATCTTAATTATACATTTCAGGTCAATAAAATGTGGGA
TGAACATACATTGAACCCCAGTGCCTCAGGGTCCATTGACTAGGGAGGCAGTGTCTAG
GGGACAGGTATGTGCAAGGCCTACCCACCAAGTGGCTCTCGCTGCAGGTATGTTGTG
GCACTTGTCTTAAGGTGAGGGTCTTATGACCGACTGTTCTGAGACAGCCCTGTGTCAG
GCAAGCTCTTCACAGGGTTGAGGTATTCCAAGACGCCATAGGAACCAAGACAGTGAAT
CATAGCTATCAGTTGCTGTGGCAAGAACCTTTGGCCACCTGGTAACAAAATT
TATGTCGTAAATTCTTGCTATTAAAAAAATCAATCTACGTTTCTGT
AGGAAAAAAACAAAGTAAAGAACAGGCCATTTCAGGTCAAAGGCTTCTCCTGC
TGGTAATGGACTGAAGACTTCTTACATCATTAAAGGCTAATTGCTGAACCACT
AGAGTATATGAACTTGTAATGATATTAGCCATAGTCCTGAGGTGTTCCCTGTG
GCCTGAGTGGTAACATTGTTGCTTATGGAGATGCTGTAACTGACCTAGTGACTCAGCT
TATCCTATTGTGCATGGCTGTGGAAAGGCCAGCGTACAAGTGGGCTTGCCCTGCCCTG
TGTACAGAGGGTGGGGAAAGAGTGAATTATTAAATTAAATGTTATAATAAGCCA
ATGTAGTTGAGACCAAGGAAATGAGCATTGAGAACACAAACTGAGTCTGGTGCAGGG
TTGTTGGACCTCACACCCCTGCTCTGAGCCACCCGGAAAGTGACATAAAGGACGCTGTG
ATCAAGTTCTGGACACTTTCTGGGATGCGTACCACTGGACTATTATGTCACAAATCTA
GTGGGTTGACGCTGCCCTGCAAGTTCAATGTCCTGCATCCTATGAAAGTCATAATGTC
TGACTGTACTGGAGGTTTCTGCATTTCAGGTTCTCGAAAATAGAGGTTGGGCTGAG
AATTCTAAACGCATGTCCTGGTGGGACGTCAAGTCAGGGTTCTCATCAAAGCTGAGAA
GTGGCTGGAATGTTCAAGCTGGTGTCTGGGAGGATCCTGTGAGCTATGAGAGAGGTGG
CTCTCAGCCTGACTCAGTGTGGCTGAACGAAGTACCTGCAGAACACACGGTAGCAGGC
TCCAAAATCGTCACCTCAAGCATGCGTCAAGCAAACCTCCGAGAAACTCCGTTCTGCT
CGGCAGACGTGTGAGCAGCTACCCAGAAGTCTCAAGCCAAAGGGGAGCCTCGCTCGCTG
GCTCCTCTGCAGGTGCCTATCGACCTGTGCTCTCTTTCCCGTGTCAAAGATGTT
GACAGGATCTGTACTTGAAACATACTACAAATGAGTTACTATGAAATAATTCTGACCT
GTGGACCGAAAAAA

FIG._11

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5' -CCCACGCGTCCGCCGAGGGACGCGCGTCAAGTGCCTGCTGGTGGCGACGGCGCGT
 GGGCAAGACCAGCCTGGTGGTCAGCTACACCACTAACGGCTACCCACCGAGTACATCCC
 TACGGCCTTCGACAACCTCTCGCCGTGGTGTCTGTAGATGGGCGGCCTGTGAGACTCCA
 GCTCTGTGACACTGCAGGACAGGGATGAGTTGACAAGCTGAGGCCCTCTGCTACACCAA
 CACAGACATCTCCTGCTGTGCTTCAGCGTGGTGAGGCCACATCCTCCAGAACGTGGG
 CGAGAAGTGGGTTCCAGAGATTGACGTCACTGCCAAAGGCCCATCATCCTGGTCGG
 GACACAGTCGGACCTCAGGGAGGACGTCAAAGTGCATAGAACTGGACAAAGTCAAAGA
 GAAGCCGGTGCCTGAAGAGGCAGCGAAGCTGTGCCGGAGGAAGTCAAAGCTGTCTCCTA
 CATCGAGTGCTCAGCGTTGACTCAGAAAAACCTCAAAGAGGTTTCGACGCCATTGT
 TGCTGGTATCCAGCACTCAGACTCCCAGCTACAGCCAAAGAAGTCTAAAAGCAGGACCC
 GGATAAAGGTGCGGGACCTGTCCAAGTCTGGTGGAGGAAGTATTGCTGCCTGGCCTGACT
 CTCGCAAATAGCAGGTGTTAACGCTGCAACAGCTCTTATGGACGAGGCTGTCAAGGAT
 GAGCCCCAAAGCACCCCTTCTGCCCTAACCTCCGTGCGGGAGCTAGGGCTGAGA
 TTCATATGCAAATACGTTTTAAAGATTGAAAGTTACATTTTCTGTTAAGTCT
 GGAAGCTTGAGCTGTTAGACCTCCGGATTAATTATATTCCATATGAAAAGGGCTCTC
 AAAAGCGGGGGTGTCAGCATGAAGTTCTGCTGGTGGTACAGGACAAAGGAGAATGAA
 TGGGAACCTCCTCTGAATTAAGGGCTAACTGAAGGGCTCAATTGCAAGGGCA

FIG._ 12

5' -CGCGGTGGCAAGACCAGCCTGGTGGTCAGCTACACCACTAACGGCTACCCACCGAGTA
 CATCCCTACGCCCTCGACAACCTCTCGCCGTGGTGTCTGTAGATGGGCGGCCTGTGAG
 ACTCCAGCTCTGTGACACTGCAGGACAGGGATGAGTTGACAAGCTGAGGCCCTCTGCTA
 CACCAACACAGACATCTCCTGCTGTGCTTCAGCGTGGTGAGGCCACATCCTCCAGAA
 CGTGGCGAGAAAGTGGGTTCCAGAGATTGACGTCACTGCCAAAGGCCCATCATCCT
 GGTGGGACACAGTCGGACCTCAGGGAGGACGTCAAAGTGCCTACAGAACCTGGCTCTGC
 AGGGCATCTGTCCTGCTGTTAAAGCAGGAGGAGGTGCTGTCTGGAGCTTAAAGTG
 TGCTGGCTCATATCGTCCCCTTGCAAGGAATTGGGCCACCTTGAGAGGCCATAGTTGA
 TGGCTATGGGACACACACACACTTTCTTAAGTCCACCAAAATGCCTGCCTGTACACA
 CACACACACACACACACACACACACACACTGGCTGGTTGCTGATGGAACCC
 TTAGACCACCCCTCCCACCCCCACCCCTCCCAAGCATGGCTGCAAGTGTCAAGGCACCAC
 ACCTCCTCTCTTGACATTCTTGAAACAGACATCATTGTAGGATCTTAATTATAC
 ATTTTTCAAGGTATAAAATGTGGGATGAACATACTTGAACCCAGTGCCTTCAGGGT
 CCATTGACTAGGGAGGCAGTGTCTAGGGGACAGGTATGTGCAAGGCCTAACCCACAGT
 GGCTTCT

FIG._ 14

5' - CCCACGCGTCCGGCGAGCTAGCAGATCTCACTTACCGAACATCTAGAGAGTCGCGC
CGCGCGCCGACGGAGCGGACATGGGCAGAGCGATGGTGGCCAGGCTAGGGCTGGGTTGC
TGCTTCTGGCACTGCTCCTACCCACGCAGATTTACTGCAACCAAACATCTGTTGCACCGT
TTCCCGTAACCAGAATATTCTGCTTCCCCAAATCCAAGTAACGCTACCACAGAGGGG
GTGGCAGCTCCCTGCAGTCCACAGCTGGTCTCTGGCTCTCTCTCTCTCTCCACAT
CTCTACTGTTAGAGACTCAGGCCAGGAAACGTCTACTTCCCCATCCTCTAGACCTACC
CCAAATGGCAACCACAAGTCCAATGTGATCAGGAAGAAACAGGTCCACCTCGAATTGGCT
GTTACCATATCTCAACAGAAAACACGGAGAATTGAAATTGACAGGGATTAAAGGACGCG
TGAAAGGTTGAGAGAAGAGAGATGCCGCTATTGAATCTGCTGGAGTTTACATCCAAAG
ATGAAGACAGCATTAGAATTGATGTGATTCTCTGAATGTGGCTTAGGAAAAGTGGACA
CTTAAAACCTCTCACTTGAATTGGGCACAGGTTGATGTAGAGATAAGGACGGGGTGC
AATGGAGACCCATTGTCATTGATTGACATGACCGATAAGGCCATAGTGCAGTTAGGTG
ATATTGAAAGCTTCTTGATGCTCTTATGTATATGTTGAAAGGAACCTACCAAGCGTTG
CTTAAATTCCAATGTGTTGTTCTACTACTAATTAAACCGTAAGCTCTAGGTA
AGTTCCATGTTGACTCTGACTGTTCTTGAATTGACCTTACTAGTAATTAAACATGTGCCAGG
ATGGTGGATTGAAACCCATCCCCAAGTCCAGGCCACACTGAATAAACTGATTCAAAAG
TCAAACAGTAGACATTCCCATTGTCGTTCTCACTCACCAAGCACCAAAATTCACTAG
AGTACACTGGTCCAGAGAGCAGAACATGTTGGCCTGGCTAATTCAAAATGCTGTCT
TTTACTTTGGTATATGTTGAGGGCTTTCTATAATTAAAGTGTGTTCTGTTAGCAAGGC
AAAAATTATGAGTCTAATTCTACAGGAAATATGAAAGGAGCCAAACTGTAACCC
GCATTGGGATGTGAAGACTGGAAGCTAACCTCATGAAATTCAAAAGTCTTTATACA
ATTCTGTACATACTTTTTTTAAGAGAAAACAAACGGTGGATCAGAATAGCCA
CGTTGGAATACTTGTTATCCATTGATATTAGATAGTTATTGGCTCTGCTGA
AAGGGGGCTTGGTCTACCGTAAGTTTCAATTCTGATATAACACATACCTCTAA
AACCTAGACATTCTGAAAAAAATCTTGTGTCATGGTACACACTGATGCTTACCC
GTACAGTAGTCTGATAACCAGAGTCATTCTCCATCTTAGAAACCTCTGGGAAGA
AGGAGAGCTCACAGACCCGAAGCTACTGTTGTAATGAACACTCCCCTGCCCTCACA
CCTGAATGCTGTACATCTATTGATTGAAATTGTTGTTGTTGTTGTTGATTCA
TAGTAACCTCTCATGTTATGGAATTGATTGACATTGAAACACAAACTGTA
AAAAAGGGCGGCCGCCGCCCGCG
ATGGCCCCCGCAGCAAGGCCGGCGCTGCCGCCGCTGCGAGGCCGCCGGCGCG
CCGGTACCGCCTGCCAGAGGCCGGGGCGCGGGGCCGCCGGCGGGCG
GGTCGGGGCGCGCGGGCGAGGGACGCCGGTCAAGTGCCTGCTGGTCCGG
GGCGCGGTGGCAAGACCAAGCAGCCTGGTGGTCAAGCTACACCAACTAACGG
TACATCCCTACGGCCTCGACAACCTCTCGGCCGGTGTCTGAGATGGCGCCTGTG
AGACTCCAGCTCTGTGACACTGCAGGACAGGATGAGTTGACAAGCTGAGGCC
TACACCAACACAGACATCTCCTGCTGTGCTCAGCGTGGTGA
AACGTGGCGAGAAGTGGTCCAGAGATTGACGTCACTGCCAAAGGCC
CTGGTCGGGACACAGTGGACCTCAGGGAGGGACGTC
TGCAAAAGAGAAGCCGGTGCCTGAAGAGGCCGAAGCTGTGCGCG
GTCTCCTACATCGAGTGCCTAGCGTTGACTCAGAAAAACCTCAAAGAG
GCCATTGTTGCTGGTATCCAGCACTCAGACTCCCAGCTACAG
AGGACCCCGATAAGGTGCGGGACCTGTCCAAGTCTGGTGGAGGAAGTATT
GCCTGACTCTCGCAAATAGCAGGTGTTAAGCTGCAACAGCT
CATAGGATGAGCCCCAAAGCACCTCTGCCCTA
GGCTGAGATTCATATGCAAACACGTTTTTAAAGATTGAAAGTACATT
TTCTG

FIG._13A

TTAAGTCTGGAAGCTTGAGCTGTAGACCTCCGGATTAATTATTCATATGAAAAGG
GCTCTCAAAGCGGGGTGTCAAGCATGAAGTTCTGCTGTGTTACAGGACAAAGGAGAAT
GAATGGGACCTCTCTGATTAAGGGCTACTGAGGGCTCAGTGCAGGGCACGTGTGCACC
AGGCTTGGTGAGAGTGAGCAAGCGTGAGCTTGAAACCACAGAGCCACCCCGGTTTG
TAAGGGCAAAGATCTGAAACAGCAAGGCCTCTGCTACGAAACCTCGAGGCCATCCC
TTCTGTTACTCAGATTCTTAGGATTAAAACAACCAACATCCCACAGCCTACTGG
CATAGTGTGGCGAACAGTCACTTGCTGTTACGGTTGTTGTTTAAATCAC
GTGACCAGTTATGCTATGAAAATGGGGAGATGCCTCGTAGAAGGCGAGTGCTGGGT
GCACATGTGACATTTCTCAGGGAGCGACTCATGGTGGAGACAGAGAGGGCTTAGCT
TGCAGGACTGGCTCTGCAGGGCATCTGTCCTGCTGTTAAAAGCAGGAGGGAGGTGCTT
GTCTGGGAGCTTAAGTGTGCTGGCTCATATCGTCCCCTGCAAGGAATTGGGCCACC
TTGAGAGGCCATAGTTGATGGCTATGGACACACACACACTTTCTTAAGTCCACCAA
AATGCCCTGCCTGTACACACACACACACACACACACACACACACACTGGCT
GGTTGCTGATGGAACCCCTAGACCACCTCCCACCCCCACCCCTCCCCAAGCATGGCT
CAAGTGTCAAGGCACACACACCTCCTCTTGACATTCTTGAAACAGACATCATTG
TAGGATCTTAATTATACATTTCAGGTCTAAATGAGGCTATGGGACACACACACAC
CCCCAGTGCCTCAGGGTCCATTGACTAGGGAGGCAGTGTCTAGGGACAGGTATGTG
AAGGCCCTTACCCACCAAGTGGCTCTCGCTGCAGGTCTGTTGTCAGGACTTGTCTTAA
GGTGGGGTCTTATGACCGACTGTTCTGAGACAGCCCTGTGTCAGGAAGCTCTTACA
GGGTTGTTAGGTATTCCAAGACGCCATAGGAACCAGACAGTGAATCATAGCTATCAGTT
GCTGTGGCAAGGAACCTTTGGCACCTGGTAACAAAATTATGTCTGTAAATT
TTTCTTGCTATTAAAAA

FIG._ 13B

5' -CCCACGCGTCCGCGGACGCGTGGTCAGGGTCCATTGACTAGGGAGGCAGTGTCTAGGG
GACAGGTATGTGCAAGGCCTTACCCACCAGTGGCTTCTCGCTGCAGGTCTGTTGTGGC
ACTTGTCTTAAAGGTGAGGGTCTTATGACCGACTGTTCTGAGACAGCCCTGTGTCAGGC
AAGCTCTTCACAGGGTTGTAGGTATTCCAAGACGCCATAGGAACCAGACAGTGAATCA
TAGCTATCAGTTGCTGTGGCAAGGAACCTCTTGGCACCTGGTAACAAAATT
TGTCTGTAATTTCTTGCTATTAAAAAAATCAATCTTACGTTCTGTAGG
AAAAAAACAAAGTAAAAGAACAGGCCATATTCAAGGTCAGGCTTCTCTGCTGG
TAAATGGGACTGAAGACTTTCTACATCATTATAAAGGCTAATTGCTGAACCACTAGA
GTATATGAACTGTTGTGAATGATATTAGCCATAGTCTCTGAGGTGTTCCCTGTGCC
TGAGTGGTAACATTGTTGCTTATGGAGATGCTGTAAGTGACCTAGTGACTCAGCTTAT
CCTATTGTGCATGGCTGTCTGGAAAGCCAGCGTACAAGTGGGCTTGCCTGCCCTGTG
ACAGAGGGTGGTGGAAAGAGTGAATTATTAAATTAAATGTTATAATAAGCCAATG
TAGTTGAGACCAAGGAAATGAGCATTGAGAACACAAACTTGAAGTCTGGTGCCAGGGTTG
TTGGACCTCACACCCTGTCTGAGCCACCCGGAAAGTGACATAAGGACGCTGTGATC
A

FIG._ 17

5' -CCCACGCGTCCGTATGAAATGGTGGAGATGCCTCGTAGAAGGCAGTGCTGGTGCACATG
TGACATTTCTTCAGGGAGCGACTCATGGTGAGACCAGAGAGGGCTCTAGCTTGAGGAC
TGGCTTCTGCAGGGCATCTGTGTCTGCTGTTAAAAGCAGGAGGGTGTCTGGAGCTTAA
GTGTGCTGGCTCATATCGTCCCCTTGCAAGGAATTGGGCCACCTTGAGAGGCCA
TAGTTGATGGCTATGGGACACACACACTTTCTTAAGTCCACAAAATGCCTGCCTGTA
CACACACACACACACACACACACACACACACACACTGGCTGGTTGCTGATGGAA
CCCTTAGACCAACCCCTCCCACCCCCACCCCTCCCCAACGATGGCTGCAAGTGTCAAGGGCACACAC
CTTCCTCTTGTGACATTCTTGAACAGACATCATTGTAGGATCTTAATTATAC
ATTTTTTCANGTCATAAAATGTGGGATGAACATACTTGAACCCCAGTGCCTTCAGGGTC
CATTGACTAGGGAGGCACTGTCTAGGGGACAGGTATGTGCAAGGCCTACCCACCA
GGCTTCTCGCTGCAGGTATTTGTGGCACTTGTCTTAAGGTGAGGGTCTTATGACCG
ACTGTTCTGAGACAGCCCTGTGTCAGGCAAGCTCTTCACAGGGTTGTAGGTATTTC
CAAGACGCCATAGGAACCAGACAGTGAATCATAGCTATCAGTTGCTGTGGCAAGGAACC
TCTTTTGGCCACCTGGTAACAAAATTATGCTGTAAATTTCCTTGCTATTAAAAA
AAAAAAATCAATCTACGTTTCTGTAGGAAAAAAACAAGTAAAAGAACAGGCCAT
ATTCAGGTCAAAGGCTTCTTCCTCTGGTAATGGGACTGAAGACTTTCTTACATCA
TTATTAAAAGGCTAATTGCTGAACCACTAGAGTATATGAACGTGTTGTGAATGATATTAGC
CATAGTCTCTGAGGTGTTCTTGTGGCCTGAGTGGTAACATTGTTGCTTATGGAGA
TGCTGTAAGTGACCTAGTGACTCAGCTATCCTATTGTGCAATGGCTGTGGAAAGCCAG
CGTACAAGTGGGGCTTGCCTGCCCTGTGTCAGAGGGTGGTGGGAAAGAGTGAATT
ATTTAATTAAATGTATAATAAAGCCAATGTAGTTGAGACCAAGGAAATGAGCATTGAGA
ACACAAACTTGAAGTCTGGTGCCAGGGTTGTTGGACCTCACACCCCTGTCTGAGCCACC
CGGAAGTGACATAAGGACGCTGTGATCA

FIG.. 15

5' - CCCACGCGTCCGGTGACCAGTTATATTGCTATGAAAATGGTGGAGATGCCTCGTAGAAGG
CGAGTGCTGGGTGCACATGTGACATTTCAGGGAGCGACTCATGGTGAGACCAAGAGA
GGGCTCTTAGCTGCAGGACTGGCTCTGCAGGGCATCTGTGCTCTGTTAAAAGCAG
GAGGAGGTGCTGTCTGGAGCTTAAGTGTGCTGGCTCATATCGTCCCCTTGAAGG
AATTGGGCCACCTTGAGAGGCCATAGTTGATGGCTATGGACACACACACACTTTCT
TAAGTCCACCAAAATGCCTGCCTGTACACACACACACACACACACACACACA
CACACACTGGCTGGTTGCTGATGGAACCTTAGACCACCCCTCCACCCCCACCCCTCCC
CAAGCATGGCTGCAAGTGTCAAGGCACCACTTCCCTTGTGACATTCTTGAACA
GACATCATTTGTTAGGATCTAATTATACATTTCAGGTCAAAATGTGGGATGAA
CATACTTTGAACCCCCAGTGCCTCAGGGTCCATTGACTAGGGAGGCAGTGTCTAGGGGA
CAGGTATGTGCAAGGCCCTACCCACCACTGGCTCTCGCTGAGGTCAATGTTGTGGCAC
TTGTTCTTAAGGTGAGGGTCTTATGACCGACTGTTCTGAGACAGCCCTGTGTAGGCAA
GCTCTTCACAGGGTTGTAGGTATTCCAAGACGCCATAGGAACCAGACAGTGAATCATA
GCTATCAGTTGCTGTGGCAAGAACCTCTTTGGCCACCTGGTAACAAAATTTATG
TCTGTAATTTCTTGTATTAAAAAAATCAATCTTACGTTTCTGTAGGAA
AAAAAAAACAAGTAAAAGAACAGGCCATATTCAAGGTCAAAGGCTTCTTCTGCTGGTA
AATGGGACTGAAGACTTCTTACATCATTATTAAAAGGCTAATTGCTGAACCACTAGAGT
ATATGAACACTGTTGTGAATGATATTAGCCATAGTCCTGAGGTGTTCTTGTGGCCTG
AGTGGTAACATTGTTGCTATGGAGATGCTGTAAGTGCACCTAGTGAACAGCTTATCC
TATTGTCATGGCTGCTGGAAAGCCAGCGTACAAGTGGGCTTGCCTGCCCTGTGTAC
AGAGGGTGGGTGGAAAGAGTGAATTATTAAATTAAATGTTATAAAAGCCAATGTA
GTTGAGACCAAGGAAATGAGCATGAGAACACAAACTTGAAGTCTGGTGCAGGGTTGT
GGACCTCACACCCCTGCTCTGAGCCACCCGGAAAGTGCACATAAAGGACGCTGTGTGATCAA
GTTCTGGACACTTCTGGATGCGTACCACTGGACTATTATGTCACAAATCTAGTGGG
TTGACGCTGCCCTGCAAGTTCAATGTCCTGCATCCTATGAAGTCATAATGTCGACT
GTACTGGAGGTTCTGCATTTCAGGGAAATAGAGGTTGGGCTGAGAATT
TAAACGCATGTCCTGGTGGACGTCAAGTCAGGGTTCTCATCAAAGCTGAGAAGTGGC
TGGAAATGTTCAAGCTGGTGTCTGGGCGAGGCTCCAAATCGTCACCTCAAGCATGCGTGC
AAGCAAACCTCCGAGAACCTCGTTCTGCTCGCAGACGTGTGAGCAGCTACCCAGAAG
TCTCAAGCCAAAAGGGGAGCCTCGCTCGCTGGCTCTGCAAGGTGCCTTATCGACCTGT
GCTCTCTCTTCCCGTGTCAAAGATGTTGGACAGGATCTGTAATTGAAACATACTAC
AAATGAGTTACTATGAAATAATTGACCTGTGGACCGAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIG.- 16